

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference KOCH67582/05	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 00/ 17014	International filing date (day/month/year) 20/06/2000	(Earliest) Priority Date (day/month/year) 21/06/1999
Applicant KOCH-GLITSCH, INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

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☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 00/17014

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

A saddle element (10) for a static mixer includes a generally ring-shaped support structure (12) having a central axis (16), concentric inner and outer, radially spaced, circumferentially extending surfaces (18, 20), and first and second axially spaced, generally parallel edge surfaces (22, 24). The inner surface (18) of the ring-shaped support structure (12) defines a fluid flow path along the central axis (16). The saddle element (10) includes a plurality of crossbars (32) that are located in the flow path (26). The crossbars (32) have a first end (34) which is closer to the transverse plane (28) of the first edge (22) of the ring-shaped support structure (12) than to the transverse plane (30) of the second edge (24) of the ring-shaped support structure (12). The crossbars (32) also have a second end (36) which is closer to the transverse plane (30) of the second edge (24) than to the transverse plane (28) of the first edge (22). The crossbars (32) are arranged in at least two separate intersecting oblique planes (38, 40, 42, 44), each of which intersecting oblique planes is disposed at an angle relative to the central axis (16). The saddle elements (10) may be used in a structure (60) which includes four flip-flopped stacked elements (10).

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B01F5/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B01F B29C B29B F28F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	EP 0 967 004 A (BAYER AG) 29 December 1999 (1999-12-29) the whole document ---	1-15
A	DE 44 28 813 A (EWALD SCHWING VERFAHRENSTECHNI) 15 February 1996 (1996-02-15) the whole document ---	1-16, 19-21
A	EP 0 655 275 A (SULZER CHEMTECH AG) 31 May 1995 (1995-05-31) the whole document ---	1-11
A	EP 0 070 915 A (SULZER AG) 9 February 1983 (1983-02-09) the whole document -----	1-11

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☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

*** Special categories of cited documents :**

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

15 September 2000

Date of mailing of the international search report

21/09/2000

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/17014

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0967004 A	29-12-1999	DE 19827851 A JP 2000037618 A	30-12-1999 08-02-2000
DE 4428813 A	15-02-1996	NONE	
EP 0655275 A	31-05-1995	DE 59309826 D JP 7185283 A US 5492408 A	11-11-1999 25-07-1995 20-02-1996
EP 0070915 A	09-02-1983	AU 8649482 A BR 8204237 A CA 1204733 A JP 58027633 A US 4497753 A	03-02-1983 12-07-1983 20-05-1986 18-02-1983 05-02-1985